

AMENDMENTS TO THE SPECIFICATION

Replace the paragraph that begins on page 1, line 8, with "This application claims" with following paragraph:

This application is a divisional application of co-pending U.S. Application Serial No. 09/150,867, filed on September 10, 1999, which claims the benefit of ~~US~~ U.S. Application Serial No. 60/058,645, filed September 11, 1997, now abandoned, herein incorporated by reference.

Replace the paragraph that begins on page 6, line 29, with "Figure 1C:" with the following paragraph: **maha, should this have special punctuation?**

Figure 1C: *Deduced amino acid sequence of Xenopus CENP-E* (SEQ ID NO:1). cDNA sequence was compiled from 6 overlapping cDNA clones. Residues identical in hCENP-E and XCENP-E are shaded. The boxed region at the amino-terminus of the sequence is that portion of XCENP-E containing the motor domain and used to assay motility *in vitro*. The boxed sequence at the C-terminus is that portion of XCENP-E designated as the tail. The underlined sequence NSREHSINA (SEQ ID NO:3) at position 599 is the 9 amino acid relative insertion encoded by one of the cDNAs isolated (see Figure 1A). The putative NLS, RKKTK (SEQ ID NO:4), immediately adjacent to the boxed tail domain is underlined.

Replace the paragraph that begins on page 27, line 6, with "Either naturally" with the following paragraph:

Either naturally occurring or recombinant CENP-E can be purified for use in functional assays. Naturally occurring CENP-E is purified, e.g., from *Xenopus* and any other source of an XCENP-E homologue, such as *Drosophila* or fungi. Recombinant CENP-E is purified from any suitable expression system.

Replace the paragraph that begins on page 53, line 12, with "Immunostaining of" with the following paragraph:

Immunostaining of cultured *Xenopus* XTC cells using α -XCENP-E_{TAIL} antibody revealed patterns of cell cycle-dependent localization similar to that observed for mammalian CENP-E (Yen, *et al.*, *Nature* 359:536-539 (1992); Brown, *et al.*, *J. Cell Sci.* 109:961-969 (1996) with the exception that during interphase XCENP-E was localized to the nucleus, consistent with the presence of a nuclear localization signal (Boulikas, *et al.*, *Gene Express.* 3:193-227 (1993)) at the C-terminal end of the rod domain (Figure 1A, NLS, and 1C underlined sequence, RKKTK (SEQ ID NO:4). Nuclear staining intensity was variable from cell to cell, probably reflecting different levels of XCENP-E accumulation, as observed for cytoplasmic CENP-E staining of interphase human cells (Yen, *et al.*, *Nature* 359:536-539 (1992); Brown, *et al.* *J. Cell. Biol.* 125:1303:1312 (1994)).

Delete the Sequence Listing on pages 63-70.

Insert the substitute Sequence Listing (Tab 1) before the Claims as pages --57-71--

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Renumber the Claims pages "57-61" to --72-76--.

Renumber the Abstract page "62" to --77--.